

CLAIMS

1. Heat exchanger for transferring thermal energy from a warm gas flow to a cold gas flow, comprising:

- 5 - a first group of ducts with a first connection and a second connection;
- a second group of ducts with a third connection and a fourth connection, which group is thermally coupled to the first group of ducts;
- 10 - first supply means for supplying the cold gas flow to the first connection;
- first discharge means for discharging the cold gas flow from the second connection;
- second supply means for supplying the warm gas flow to
- 15 the third connection; and
- second discharge means for discharging the warm gas flow from the fourth connection, characterized in that the device comprises alternating means for temporarily and repeatedly alternating in pairs the supply and discharge
- 20 means on the connections.

2. Heat exchanger as claimed in claim 1, characterized in that the alternating means are adapted to temporarily connect:

- 25 - the first supply means to the fourth connection;
- the first discharge means to the third connection;
- the second supply means to the second connection; and
- the second discharge means to the first connection.

3. Heat exchanger as claimed in claim 1, characterized in that the device comprises means for temporarily

30 connecting:

- the first supply means to the second connection;
- the first discharge means to the first connection;
- the second supply means to the fourth connection; and

- the second discharge means to the third connection.

4. Heat exchanger as claimed in claim 1, 2 or 3, characterized in that the heat exchanger is provided with supply means for supplying water to the first group of ducts.

5 5. Heat exchanger as claimed in claim 1, characterized in that the alternating means are adapted to temporarily connect:

- the first supply means to the third connection;
- the first discharge means to the fourth connection;
- 10 - the second supply means to the first connection; and
- the second discharge means to the second connection.

6. Heat exchanger as claimed in any of the foregoing claims, characterized in that the heat exchanger comprises control means for repeatedly changing the connections.

15 7. Heat exchanger as claimed in claim 6, characterized in that the control means are adapted to alternate the connections after a predetermined period has elapsed.

8. Heat exchanger as claimed in claim 6, characterized in that the control means are adapted to alternate the
20 connections when a predetermined measurement value has been reached:

9. Heat exchanger as claimed in any of the foregoing claims, characterized in that the heat exchanger is formed by a recuperator for recovering thermal energy from ventilating
25 air of a building.

10. Heat exchanger as claimed in any of the foregoing claims, characterized in that the device comprises a bypass duct between the second supply means and the second discharge means, wherein a controllable valve is arranged in the bypass
30 duct.

11. Heat exchanger as claimed in any of the foregoing claims, characterized in that the first connection and the fourth connection debouch in a first chamber, that the second

connection and the third connection debouch in a second chamber, and that the alternating means comprise two valves, each arranged in one of the chambers.

12. Set of heat exchangers as claimed in claim 11,
5 characterized in that the heat exchangers are placed on or adjacently of each other, wherein the chambers are placed one above another and the valves arranged in the chambers can be operated by a common operating element.

13. Heat exchanger as claimed in any of the foregoing
10 claims, characterized in that the heat exchanger is combined with an auxiliary heat exchanger, wherein the first group of ducts of the auxiliary heat exchanger is connected between the first discharge means and the first valve and the second group of ducts of the auxiliary heat exchanger is connected
15 between the second group of ducts and the second supply means.